

## CLAIMS

What is claimed is:

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at leas
6.  
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said co

sensory

8. A sensor array comprising at least two electronic devices which are supported for movement relative to one another and at least one stretchable

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11. The sensor array as in claim 10 wherein said interconnect comprises a plurality of “V” shaped sections.

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13. The sensor array as in claim 12 wherein said interconnect comprises a plurality of “V” shaped sections, which when unsupported form said coil.

14. The sensor array as in claim 9 wherein said coiled conductor is di-helic.

15. The sensor array as in claim 9 which comprises a tactile sensing array.

16. The sensor array as in claim 15 which comprises a tactile sensing portion of a robot.
17. The sensor array as in claim 16 wherein said sensor array is arranged in a flexible and stretchable skin of said robot.
18. The sensor array as in claim 9 which includes a plurality of said stretchable interconnects.
19. A process for making a stretchable interconnect for electrically connecting electronic devices which are supported for movement relative to one another, comprising:
  - forming said devices supported by a substrate, said devices being spaced apart from each other in said substrate;
  - depositing an interconnect conductor supported by said substrate for electrically coupling a contact of one device to a contact of another device,;
  - photolithographically patterning said interconnect conductor with a pattern which upon removal of said substrate from support of said interconnect conductor will cause said interconnect conductor to form a stretchable interconnect.
20. The process as in claim 19 wherein said interconnect conductor is formed with a stress gradient extending through at least a portion of the thickness of said conductor so that upon removal of said substrate from support of said interconnect conductor will cause said interconnect conductor to form a stretchable coil.

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|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) | (33) | (34) | (35) | (36) | (37) | (38) | (39) | (40) | (41) | (42) | (43) | (44) | (45) | (46) | (47) | (48) | (49) | (50) | (51) | (52) | (53) | (54) | (55) | (56) | (57) | (58) | (59) | (60) | (61) | (62) | (63) | (64) | (65) | (66) | (67) | (68) | (69) | (70) | (71) | (72) | (73) | (74) | (75) | (76) | (77) | (78) | (79) | (80) | (81) | (82) | (83) | (84) | (85) | (86) | (87) | (88) | (89) | (90) | (91) | (92) | (93) | (94) | (95) | (96) | (97) | (98) | (99) | (100) |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|

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30. The process as in claim 29 further comprising mounting said sensor array to a tactile sensing portion of a robot.

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